

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (*Currently Amended*) An operational ~~Operational~~-amplifier arrangement comprising a first ~~(OAA;OAA")~~ including an arrangement input terminal ~~(IN; IN1")~~ to which an input voltage is supplied and a first ~~an~~-arrangement output terminal ~~(OUT; OUT1")~~ terminal, said operational amplifier arrangement further comprising:

a non-linear amplifier ~~(A2;A2")~~, having a pair of input terminals, one of which is coupled to said first arrangement input terminal, said non-linear amplifier further comprising ~~including~~ an output terminal, ~~coupled to said arrangement output terminal (OUT; OUT1")~~

a linear amplifier ~~(A3)~~, having a pair of input terminals, one of which is coupled to said first arrangement input terminal, said linear amplifier further comprising ~~including~~ an output terminal ~~which is coupled to said arrangement output terminal (OUT; OUT1")~~,

whereby the output terminal of said non-linear amplifier ~~(A2; A2")~~ is coupled to the output terminal of said linear amplifier ~~(A3; A3")~~ via a first series impedance ~~(R1; R1")~~,

whereby the output terminal of said linear amplifier ~~(A3; A3")~~ is coupled to the first arrangement output terminal ~~(OUT; OUT1")~~ via a first terminating impedance ~~(Rterm; Rterm")~~,

and whereby the arrangement further comprises a first ~~includes an active back termination~~ ~~backtermination~~ arrangement ~~(ABT; RFABT")~~ coupled between the first

arrangement output terminal (~~OUT~~; ~~OUT1~~”) and either one of said pair of input terminals of said linear amplifier (~~A3~~; ~~A3~~”).

2. (*Currently Amended*) The operational ~~Operational~~ amplifier arrangement (~~OAA~~; ~~OAA~~”) according to claim 1, wherein characterised in that said non-linear amplifier receives a first supply voltage from (~~A2~~; ~~A2~~”) ~~is operating between~~ a first power supply (~~VA2~~), while said linear amplifier receives a second supply voltage from (~~A3~~; ~~A3~~”) ~~is operating between~~ a second power supply (~~VA3~~) which exceeds the first supply voltage of said first power supply source.

3. (*Currently Amended*) The operational ~~Operational~~ amplifier arrangement (~~OAA~~”) according to claim 1, wherein characterised in said operational amplifier arrangement (~~OAA~~”) further comprises ~~includes~~ a second arrangement input terminal (~~IN2~~”), and a second arrangement output terminal (~~OUT2~~”) terminal, said input signal being a differential input signal[[,]] applied between said first arrangement input terminal (~~IN1~~”) and said second arrangement input terminal (~~IN2~~”), ~~between said pair of input terminals of said linear amplifier and applied between said pair of input terminals of said non-linear amplifier~~, said non-linear amplifier comprising (~~A2~~”) ~~thereby including~~ a second output terminal coupled to said second arrangement output terminal (~~OUT2~~”) via a second series impedance (~~R1~~”), said linear amplifier comprising (~~A3~~”) ~~thereby including~~ a second output terminal coupled to the second arrangement output terminal (~~OUT2~~”) via a second terminating impedance (~~Rterm~~”), said operational amplifier arrangement further comprising ~~including~~ a second active back termination

~~back~~termination arrangement (~~ABT~~) coupled between said second arrangement output terminal (~~OUT2~~) and the other one of said pair of input terminals of said linear amplifier (~~A3~~).

4. (*Currently Amended*) The operational ~~Operational~~ amplifier arrangement (~~OAA~~) according to claim 3, wherein ~~characterised in that~~ said first series impedance (~~R1~~) is substantially equal to said second series impedance (~~R1~~), said first terminating impedance (~~Rterm~~) is substantially equal to said second terminating impedance and (~~Rterm~~), said first active back termination arrangement (~~RFABT~~) is substantially equal to said second active back termination arrangement (~~RFABT~~).

5. (*Currently Amended*) The operational ~~Operational~~ amplifier arrangement comprising (~~OAA~~; ~~OAA10~~; ~~OAA10~~) including a pair of arrangement input terminals (~~IN~~, ~~IN~~; ~~IN10~~, ~~IN11~~; ~~IN10~~, ~~IN11~~) and a pair of arrangement output terminals (~~OUT~~, ~~OUT~~; ~~OUT10~~, ~~OUT11~~; ~~OUT10~~, ~~OUT11~~), said operational amplifier arrangement further comprising:

[[~~-~~]] first and second non-linear amplifiers (~~A2~~, ~~A2~~; ~~A20~~, ~~A21~~; ~~A20~~, ~~A21~~), coupled between said arrangement input terminals and said arrangement output terminal,

[[~~-~~]] first and second linear amplifiers (~~A3~~, ~~A3~~; ~~A30~~, ~~A31~~; ~~A30~~, ~~A31~~), coupled between said arrangement input terminals and said arrangement output terminals,

[[~~-~~]] whereby respective output terminals of said non-linear amplifiers are coupled to respective output terminals of said linear amplifiers via respective series impedances (~~R1~~, ~~R1~~; ~~R10~~, ~~R11~~; ~~R10~~, ~~R11~~),

[[-]] whereby respective output terminals of said linear amplifiers are coupled to respective arrangement output terminals via respective terminating impedances (~~Rterm, Rterm'; Rterm10, Rterm11; Rterm10', Rterm11'~~),

[[-]] and whereby the arrangement further includes a pair of active back termination ~~backtermination~~ arrangements (~~RFABT, RFABT'; RFABT10, RFABT11; RFABT10', RFABT11'~~) coupled between respective arrangement output terminals and either one of said pair of input terminals of either pair of linear amplifiers (~~A3, A3'; A30, A31; A30', A31'~~).

6. (*Currently Amended*) The operational ~~Operational~~ amplifier arrangement according to claim 5, wherein: ~~characterised in that~~

said first and second non-linear amplifiers receive (~~A2, A2'; A20, A21; A20', A21'~~) are ~~operative between~~ a first power supply voltage (~~VA2~~), and

said first and second linear amplifiers receive (~~A3, A3'; A30, A31; A30', A31'~~) are ~~operative between~~ a second power supply voltage (~~VA3~~) which exceeds said first power supply voltage (~~VA2~~).

7. (*Currently Amended*) The operational ~~Operational~~ amplifier according to claim 5, wherein ~~characterised in that~~ said respective series impedances (~~R1, R1'; R10, R11; R10', R11'~~) have substantially equal resistance values, said first and said second non-linear amplifiers (~~A2, A2'; A20, A21; A20', A21'~~) are substantially identical, said first and said second linear amplifiers (~~A3, A3'; A30, A31; A30', A31'~~) are substantially identical, said respective

terminating impedances (~~Rterm, Rterm'; Rterm10, Rterm11; Rterm10', Rterm11'~~) are substantially identical, and said active back termination ~~backtermination~~ arrangements of said pair of active back termination ~~backtermination~~ arrangements (~~RFABT, FABT'; RFABT10, FABT11; RFABT10', FABT11'~~) are substantially identical.

8. (*Currently Amended*) The operational ~~Operational~~ amplifier arrangement (~~OAA10'~~) according to claim 5, wherein characterised in that said operational amplifier arrangement comprises (~~OAA10'~~) ~~includes~~ a second pair of active back terminating arrangements (~~RFABT100, FABT101~~) coupled between the respective output terminals of said first and said second linear amplifiers and either input terminals of either said first or said second linear amplifiers (~~A30', 31~~).

9. (*Currently Amended*) The operational ~~Operational~~ amplifier arrangement according to claim 8, wherein characterised in that the active back terminating arrangements of said second pair of active back terminating ~~backterminating~~ arrangements are substantially identical.

10. (*Currently Amended*) The operational amplifier ~~Amplifier~~ arrangement according to claim 1, wherein characterised in that the gain of a branch between one of said arrangement input terminals coupled in series with one of said linear amplifiers, said first terminating impedance ~~resistance~~ to one of said arrangement output terminals equals the gain of a parallel branch between said one arrangement input terminal in series with one of said non-linear amplifiers said

first series impedance resistance and said first terminating impedance resistance to said one of said arrangement output terminals.

11. (*Currently Amended*) The operational amplifier ~~Amplifier~~ arrangement according to claim 10, wherein characterised in that the output impedance between one of said arrangement output terminals and one of said arrangement input terminals via said branch equals the output impedance between said one arrangement output terminal and said one arrangement input terminal via said parallel branch.

12. (*Currently Amended*) The operational ~~Operational~~ amplifier arrangement according to claim 5, wherein characterised in that the sum of said respective series impedance and said respective terminating impedance in series with said respective series impedance is equal to the series load impedance.

13. (*Currently Amended*) The operational ~~Operational~~ amplifier arrangement according to claim 8, wherein characterised in that the sum of said respective series impedance and said respective terminating impedance in series with said respective series impedance is lower than the series load impedance.